REMARKS

The present Amendment amends claims 1, 2, 9-11, 13 and 14, leaves claims 3-8 and 12 unchanged and adds new claims 15-20. Therefore, the present application has pending claims 1-20.

Claims 1, 2, 5, 6 and 9-14 stand rejected under 35 USC §102(b) as being anticipated by Miyamoto (U.S. Patent No. 5,845,061); claims 3 and 7 stand rejected under 35 USC §103(a) as being unpatentable over Miyamoto in view of Padmanabhan (U.S. Patent Application Publication No. 2004/0107300); claim 4 stands rejected under 35 USC §103(a) as being unpatentable over Miyamoto in view of Raz (U.S. Patent No. 5,913,227); and claim 8 stands rejected under 35 USC §103(a) as being unpatentable over Miyamoto in view of Odanaka (JP No. 05-241876). These rejections are traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 1-14 are not taught or suggested by Miyamoto, Padmanabhan, Raz or Odanaka whether taken individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

Amendments were made to the claims to more clearly describe features of the present invention as recited in the claims. Particularly, amendments were made to the claims to more clearly recite that the present invention is directed a server system having a plurality of servers that can be each operated as a primary system and a standby system, the server, a program for making the server operate as a primary system and a standby system and a method of access control in the server.

According to the present invention the server system the servers can be each operated as a primary system and a standby system by system switching, and the server system further includes a shared disk unit for storing data accessed by the servers.

Further according to the present invention each server includes application means, driver means that acquires information on a configuration inside said shared disk unit after starting of said system at initial operation as both a primary system and a standby system and, based on said configuration information, identifies areas of the shared disk unit in which an access request can be sent and when the driver means receives an access request to the shared disk unit, sends the access request to the shared disk unit based on the configuration information, and access control means that judges whether an access request issued by the application means should be sent, based on a management table indicating inhibited types of access requests for each access destination and sends the access request to the driver means when the access request is not inhibited for an access destination of the access request.

Still further, according to the present invention switching between a server operating as the primary system and a server operating as the standby system is conducted by inhibiting or permitting access requests of the standby system based on the management table.

Thus, the present invention enables fast, hot-standby switching because the server, in both cases where operated as a primary system and a standby system, acquires information on a configuration inside the shared disk unit at initial operation, and thus the standby system no longer needs to

acquire the configuration information inside the shared disk unit at the time of system switch is hot-standby. These features of the present invention are described, for example, on page 15, lines 18-22 and page 16, lines 6-15 of the present application.

Further, according to the present invention data corruption can be prevented by the access control means of the primary system inhibiting the application from conducting a read/write on the shared disk unit and thus data outflow of the primary system can be prevented when an error occurs in the primary system or a switching command is issued. These features of the present invention are very advantageous because if requests accumulated in a queue of the primary system are transmitted to the shared disk unit of the standby system after an error has detected, inputs/outputs which could not be executed by the error are generated, and data consistency might be lost from executing the requests that follow, thereby eventually corrupting data.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by any of the references of record whether taken individually or in combination with each other. Particularly, the above described features of the present invention now more clearly recited in the claims are not taught or suggested by Miyamoto, Padmanabhan, Raz or Odanaka whether taken individually or in combination with each other as suggested by the Examiner.

Miyamoto teaches a client server system, for example, as illustrated in Fig. 1 thereof having a plurality of clients 103, a server of execution system 101, a server of fault of auxiliary system 102 and a shared disk 106 shared between the servers 101 and 102. Miyamoto teaches that a process

administrator is provided in each of the servers and when a fault has occurred in a disk processor in the server of execution system, the process administrator in the server of execution system transmits only requests related to the disk processor among requests received from clients to the server of fault auxiliary system. Miyamoto further teaches that a process administrator in the server of fault auxiliary system conducts correspondence of the processing on the request transmitted from the server of execution system.

Thus, in Miyamoto the client server system operates such that when a fault occurs in the server of execution system (primary system) 101, a request sent from a client is transmitted to the server of fault auxiliary system (standby system) 102 such that the standby system performs the requested processing.

Although in Miyamoto the disk processor operates an access control, there is no teaching or suggestion that the standby system acquires the configuration information of the inside of the shared disk at initial operation as in the present invention. Therefore, in Miyamoto when switching the system , acquiring the configuration information of the inside of the shared disk is still required contrary to that of the present invention.

The present invention as recited in the claims further differs from that taught by Miyamoto being that in the present invention during normal operation both the primary system and the standby system are in effect placed in the active state and processings performed by the standby system are inhibited by blocking access requests of the standby system using a management table. This feature of the present invention allows a situation such that when a fault occurs in the primary system, access requests of the

primary system are blocked by only changing the management table and releasing the inhibiting of access to the standby system. This teaching of the present invention as recited in the claims allows extremely rapid transition from the primary system to the standby system upon occurrence of a failure since the standby system is in an active state during normal operation and is only prevented from responding to access requests due to entries in the management table. Such teachings are clearly not found in Miyamoto.

Thus, Miyamoto, fails to teach or suggest driver means that acquires information on a configuration inside the shared disk unit after starting of the system at initial operation as both a primary system and a standby system and, based on the configuration information, identifies areas of the shared disk unit in which an access request can be sent and when the driver means receives an access request to the shared disk unit, sends the access request to the shared disk unit based on the configuration information as recited in the claims.

Further, Miyamoto fails to teach or suggest access control means that judges whether an access requested issued by the application means should be set, based on a management table indicating inhibited types of access for each access destination and sends the access to the driver means when the access request is not inhibited for an access destination for an access request as recited in the claims.

Still further, Miyamoto fails to teach or suggest that switching between a server operating as the primary system and a server operating as the standby system is conducted by inhibiting or permitting access requests of the standby system based on the management table as recited in the claims.

Therefore, Miyamoto fails to teach or suggest the features of the present invention as now more clearly recited in the claims and as such does not anticipate nor render obvious the claimed invention. Accordingly, reconsideration and withdrawal of the 35 USC §102(b) rejection of claims 1, 2, 5, 6 and 9-14 as being anticipated by Miyamoto is respectfully requested.

The above described deficiencies of Miyamoto are not supplied by any of the other references of record. Particularly, the above described deficiencies of Miyamoto are not supplied by Padmanabhan, Raz or Odanaka. Therefore, combining the teachings of Miyamoto with one or more of Padmanabhan, Raz or Odanaka does not render obvious the features of the present invention as now more clearly recited in the claims.

Padmanabhan is merely relied upon for an alleged teaching of console for sending to the servers a system switching command inputted by an operator. Raz is merely relied upon by the Examiner for an alleged teaching that the agent makes a determination by referring to a locally maintaining table in which the agent records the granting and release of locks per file and that shared lock can be granted and the file access request is a read only not a write request. Odanaka is merely relied upon for an alleged teaching of sending a command that is inputted by an operator and outputting the content of the management table.

However, it is quite clear that each of the above described teachings of Padmanabhan, Raz and Odanaka do not anticipate nor obvious the above described features of the present invention shown above not to be taught or suggested by Miyamoto.

Particularly, each of Padmanabhan, Raz and Odanaka do not teach or suggest that the standby system acquires the configuration information of the inside of the shared disk at initial operation as in the present invention.

Thus, Padmanabhan, Raz and Odanaka each fails to teach or suggest driver means that acquires information on a configuration inside the shared disk unit after starting of the system at initial operation as both a primary system and a standby system and, based on the configuration information, identifies areas of the shared disk unit in which an access request can be sent and when the driver means receives an access request to the shared disk unit, sends the access request to the shared disk unit based on the configuration information as recited in the claims.

Further, Padmanabhan, Raz and Odanaka each fails to teach or suggest access control means that judges whether an access requested issued by the application means should be set, based on a management table indicating inhibited types of access for each access destination and sends the access to the driver means when the access request is not inhibited for an access destination for an access request as recited in the claims.

Still further, Padmanabhan, Raz and Odanaka each fails to teach or suggest that switching between a server operating as the primary system and a server operating as the standby system is conducted by inhibiting or permitting access requests of the standby system based on the management table as recited in the claims.

Therefore, since Padmanabhan, Raz and Odanaka each fails to teach or suggest the above described deficiencies of Miyamoto relative to the features of the present invention as now recited in the claims, combining

Miyamoto with one or more of Padmanabhan, Raz and Odanaka does not render obvious the claimed invention. Accordingly, reconsideration and withdrawal of the 35 USC §103(a) rejection of claims 3 and 7 as being unpatentable over Miyamoto in view of Padmanabhan, reconsideration and withdrawal of the 35 USC §103(a) rejection of claim 4 as being unpatentable over Miyamoto in view of Raz, and reconsideration and withdrawal of the 35 USC §103(a) rejection of claim 8 as being unpatentable over Miyamoto in view of Odanaka are respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1-14.

As indicated above, the present Amendment adds new claims 15-20. New claims 15-20 recite many of the same features now recited in claims 1-14 shown above not to be taught or suggested by Miyamoto, Padmanabhan, Raz or Odanaka. Thus, the same arguments presented above with respect to claims 1-14 apply as well to new claims 15-20. Therefore, new claims 15-20 are allowable over the prior art of record for the same reasons as claims 1-14.

In view of the foregoing amendments and remarks, applicants submit that claims 1-20 are in condition for allowance. Accordingly, early allowance of claims 1-20 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (TSM-33).

Respectfully submitted,

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